

HIGH RESOLUTION MULTI-LENS IMAGING DEVICE

ABSTRACT

An imaging device (30) can include a plurality of lenses (51, 52, 53, 54) mounted on a multi-dimensional support structure (32), a plurality of optical detectors (40) corresponding to the plurality of lenses for capturing an optical signal from at least two lenses among the plurality of lenses, and a processor (34) for combining the optical signal from at least two lenses to form an image and electronically controlling the field of view and a resolution of the image. The plurality of lenses each can include an array of sub-wavelength apertures or a plurality of photon sieve lenses (36).